EISPC Energy Zones Mapping Tool

National Association of State Energy Officials Webinar: New Online Tools for Energy Data Analysis

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EISPC represents 39 states, District of Columbia, City of New Orleans and 8 Canadian Provinces located within the Eastern Interconnect (EI).

EISPC is comprised of public utility commissions, Governor’s offices, state energy offices, and other key government agencies and representatives.
EISPC Energy Zones Study Is a Collaborative Effort

- EISPC is collaborating with three DOE Laboratories:
  - Argonne National Laboratory
  - Oak Ridge National Laboratory
  - National Renewable Energy Laboratory

- Coordinated by EISPC Energy Zones Working Group

- Supported by DOE Office of Electricity Delivery and Energy Reliability (DOE/OE) based on funding and directives of the American Recovery and Reinvestment Act
EISPC Energy Zones Study

Objectives:

• Compile clean energy (low or no carbon) resource data for 9 clean energy resource categories

• Develop web-based GIS mapping tool that utilizes clean energy resource availability and flexible screening factors

• Provide policy and law information that encourages or inhibits potential clean energy resource development

• Enable States to collaborate on long-term regional transmission planning
Nine Clean Energy Resource Categories

- Wind
- Biomass
- Clean Coal (with carbon capture and storage)
- Water
- Geothermal
- Storage
- Solar
- Nuclear
- Natural Gas
## Clean Energy Technologies

### Biomass
- New biomass-fired plant with traditional combustion
- Biomass co-fire with existing coal plant
- Landfill gas extraction and plant inventory
- Methane extraction from wastewater treatment
- Methane extraction from animal manure processing

### Clean Coal
- New clean pulverized coal technology
- New integrated gasification combined cycle
- New coal fluidized bed
- Retrofitted pulverized coal

### Geothermal
- Enhanced geothermal system
- Geopressed geothermal

### Natural Gas (planned for June 2013)
- Combined cycle
- Underground natural gas storage
- Above-ground natural gas storage

### Nuclear
- Large light-water reactor
- Small modular reactor, integral pressurized-water reactor
- High-temperature gas cooled reactor/
  Very high temperature gas-cooled reactor

### Solar
- Concentrating solar power
- Utility-scale photovoltaic
- Rooftop photovoltaic solar

### Storage
- Hydroelectric pumped storage
- Compressed air energy storage

### Water
- Added output from existing hydropower dam
- New output from existing non-powered dam
- In-stream hydrokinetic energy
  - Tidal hydrokinetic energy
  - Wave energy

### Wind
- Land-based wind turbine
- Offshore wind turbine

### Suitability model
Report based on inventory or
energy resource availability
**EZ Mapping Tool – Users and Capabilities**

**Intended for:**
- Regulators and policy makers
- Industry
- NGOs
- Grid operators
- Consumer unions
- Experts/Researchers

**Provides:**
- A large repository of energy resource data
- Flexible modeling approach
- Custom mapping capabilities
- Reports
- Searchable policy and incentives database
March 29, 2013: EZ Mapping Tool released for public viewing and registration

- Users can browse public pages of the website, must register to use the tool
- Terms and conditions of End User Agreement must be accepted before running the tool

http://eispctools.anl.gov
EISPC Energy Zones Mapping Tool

Analysis Process

Review supporting information

- Technology descriptions
- Metadata
- Policy
- Maps
- Documents
- Links

Specify locations to analyze

Visualize map
Superimpose information
Query locations

Run and revise models
Run reports

Library
EZ Mapping Tool Demonstration

• Register for the tool here: http://eispctools.anl.gov

• Questions/comments at any time to: eispctools@anl.gov